

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-18 (cancelled)

Claim 19 (new): An isolated polynucleotide comprising:

- (a) a nucleotide sequence encoding a polypeptide having cellulose synthase activity, wherein the polypeptide has an amino acid sequence of at least 85% sequence identity, based on the Clustal V method of alignment, when compared to SEQ ID NO:10, or
- (b) a full-length complement of the nucleotide sequence of (a).

Claim 20 (new): The polynucleotide of Claim 19, wherein the amino acid sequence of the polypeptide has at least 90% sequence identity, based on the Clustal V method of alignment, when compared to SEQ ID NO:10.

Claim 21 (new): The polynucleotide of Claim 19, wherein the amino acid sequence of the polypeptide has at least 95% sequence identity, based on the Clustal V method of alignment, when compared to SEQ ID NO:10.

Claim 22 (new): The polynucleotide of Claim 19, wherein the amino acid sequence of the polypeptide comprises SEQ ID NO:10.

Claim 23 (new): The polynucleotide of Claim 19, wherein the nucleotide sequence comprises SEQ ID NO:9.

Claim 24 (new): A vector comprising the polynucleotide of Claim 19.

Claim 25 (new): A recombinant DNA construct comprising the polynucleotide of Claim 19 operably linked to at least one regulatory sequence.

Claim 26 (new): A method for transforming a cell, comprising transforming a cell with the polynucleotide of Claim 19.

Claim 27 (new): A cell comprising the recombinant DNA construct of Claim 25.

Claim 28 (new): A method for producing a plant comprising transforming a plant cell with the recombinant DNA construct of Claim 25 and regenerating a plant from the transformed plant cell.

Claim 29 (new): A plant comprising the recombinant DNA construct of Claim 25.

Claim 30 (new): A seed comprising the recombinant DNA construct of Claim 25.